We claim:

[c1] 1. A method of attenuating downlink transmit power to transmit a frame of data in a wireless network, each frame composed of timeslots, each timeslot composed of quarter symbols, comprising:

(a) mapping each quarter symbol of a frame to an offset within a frame attenuation buffer;

(b) computing a template for the frame;

(c) providing attenuation values for each quarter symbol, the computed attenuation values being grouped in blocks;

(d) recursively copying blocks of attenuation values into the frame attenuation buffer based on the template; and

(e) attenuating transmit power of the frame based on contents of the frame attenuation buffer.

[c2] 2. The method of claim 1, wherein steps (a) and (b) are performed only once at an initialization time.

[c3] 3. The method of claim 1, wherein steps (c) through (e) are performed if there is a change in transmit power of the frame as compared to the transmit power of a preceding frame.

[c4] 4. The method of claim 1, wherein if there is no change in transmit power of the frame from transmit power of a preceding frame, the frame is transmitted without computations.

[c5] 5. The method of claim 1, wherein if there is a change in transmit power between adjacent timeslots in the frame, step (c) is performed for the first quarter symbols of each timeslot in the frame and copied into remaining quarter symbols of each respective timeslot.

[c6] 6. The method of claim 1, wherein if adjacent timeslots are at the same power level, the first quarter symbol is copied from a previous timeslot to an adjacent current timeslot.

[c7] 7. The method of claim 1, wherein if there is a change in transmit power between adjacent timeslots in the frame, step (c) is performed for each of the final eight quarter symbols in each timeslot in the frame that adjoins a timeslot having a different transmit power.

[c8] 8. The method of claim 1, further comprising the steps of:

(f) determining whether transmit power level differs between adjacent timeslots, and

(g) adjusting the computed attenuation values up or down in each of the timeslots based on the difference in power level between adjacent timeslots, steps (f) and (g) being performed prior to step (e), if step (f) determines that transmit power level differs between adjacent timeslots.

[c9] 9. The method of claim 8, wherein steps (f) and (g) are performed for the last eight quarter symbols in each timeslot, if there is a change in power between adjacent timeslots.

[c10] 10. The method of claim 1, wherein computations are performed in a span of about 40 msec, the duration of the frame.

[c11] 11. The method of claim 10, wherein if power is constant across the frame, computations are performed in a span of about 11-14 msec.

[c12] 12. The method of claim 10, wherein if power varies between timeslots, computations are performed in a span of about 38 msec.

[c13] 13. The method of claim 1, wherein step (c) further includes computing attenuation values for less than all the quarter symbols in the frame.

[c14] 14. The method of claim 13, wherein attenuation values are computed for a first quarter symbol and a final eight quarter symbols in each timeslot, when power is changing between adjacent timeslots in or across a frame.

[c15] 15. The method of claim 13, wherein attenuation values for the first quarter symbol are computed and copied into all remaining quarter symbols in the frame, when power is constant across all timeslots in the frame.

[c16] 16. The method of claim 1, wherein step (d) further comprises the steps of:

(d1) copying a first block of attenuation values stored in the frame attenuation buffer into an adjacent block, thereby forming two identical blocks;

(d2) copying the two identical blocks into two adjacent blocks in the frame attenuation buffer

[c17] 17. The method of claim 13, wherein step (d2) is logarithmically repeated to copy twice the number of blocks of the previous copying step into an equal number of blocks in the successive copying step to fill the attenuation buffer.

[c18] 18. An apparatus for attenuating downlink transmit power to transmit a frame of data in a wireless network, each frame composed of timeslots, each timeslot composed of quarter symbols, comprising:

a buffer for storing attenuation values to be used in attenuating transmit power of the frame;

a processor for mapping each quarter symbol to an offset within the buffer, for computing a template to be used for filling the buffer, for providing attenuation values for each quarter symbol in the buffer, the provided attenuation values being grouped in blocks, and for recursively

copying blocks of attenuation values into the buffer based on the template; and

a controller for outputting contents of the buffer to attenuate transmit power of the frame.

[c19] 19. The apparatus of claim 18, wherein the processor maps the quarter symbols and computes the template only once at an initialization time.

[c20] 20. The processor of claim 18, wherein if there is a change in transmit power between adjacent timeslots in the frame, the processor computes attenuation values for the first quarter symbols of each timeslot in the frame, the attenuation values being copied in the buffer for the remaining quarter symbols of each respective timeslot.

[c21] 21. The processor of claim 18, wherein if adjacent timeslots are at the same power level, a first quarter symbol is copied from a previous timeslot to an adjacent current timeslot.

[c22] 22. The processor of claim 18, wherein if there is a change in transmit power between adjacent timeslots in the frame, the processor computes attenuation values for each of the final eight quarter symbols in each timeslot that adjoins a timeslot having a different transmit power.

[c23] 23. The apparatus of claim 18, wherein process time is about 40 msec, the duration of the frame.

[c24] 24. The apparatus of claim 23, wherein if transmit power level is constant across the frame, processing time is about 11-14 msec.

[c25] 25. The apparatus of claim 23, wherein if transmit power level varies between timeslots, processing time is about 38 msec.

[c26] 26. The apparatus of claim 18, wherein the processor computes attenuation values for less than all the quarter symbols in the frame.

[c27] 27. The apparatus of claim 26, wherein the processor computes attenuation values for a first quarter symbol and a final eight quarter symbols in each timeslot, when power is changing between adjacent timeslots in or across a frame.

[c28] 28. The apparatus of claim 26, wherein the processor computes attenuation values for the first quarter symbol, the computed attenuation values being copied into all remaining quarter symbols in the frame, when power is constant across all timeslots in the frame.

[c29] 29. The apparatus of claim 18, wherein the processor performs recursive copying by copying a first block of attenuation values stored in the buffer into an adjacent block in the buffer, thereby forming two identical blocks, and thereafter copying the two identical blocks into two adjacent blocks in the buffer.

[c30] 30. The apparatus of claim 29, wherein copying is logarithmically repeated to copy twice the number of blocks of the previous copying step into an equal number of blocks in the successive copying step to fill the buffer.